

# AIRMIC FastTrack Forum

## Measuring and Communicating Risk

02 April 2019

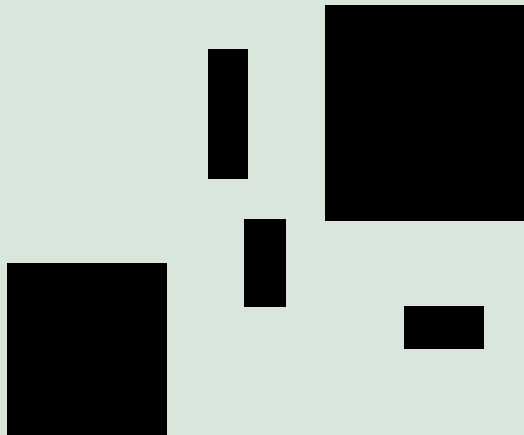
## Topic

**“How do I demonstrate value of what risk and insurance does in my organization to our leadership, and how can I communicate this?” Avoiding technical language and terminology we understand but might leave others cold, is a good place to start. But are there other tools and techniques you can use?**

# Agenda

1. Role of risk management
2. Risk management process
3. Role of risk reporting
4. Examples
5. Risk appetite

## Role of RM





## Questions we need to answer

1. What is the role of risk and insurance?
2. What are the objectives for risk and insurance?
3. What are the reporting objectives - internal and external?

## Lessons learned - six aspects of successful risk management

- 1 Risk management process must provide demonstrable value
- 2 Process and framework must be tailored, proportionate and fit for purpose
- 3 Simplicity is critical – start top down, common vocabulary, avoid jargon
- 4 Risk reporting must support decision-making
- 5 Integration with risk transfer will achieve benefits
- 6 Risk process should be subject to continuous improvement

# Critical Success Factors

1

- Identification of key exposures (& threats to objectives)

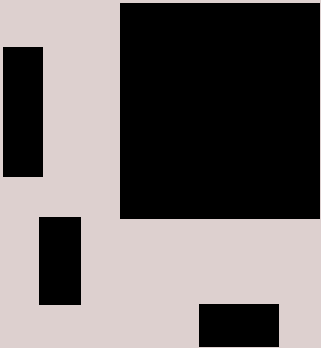
2

- Understanding of likelihood and impact of key threats

3

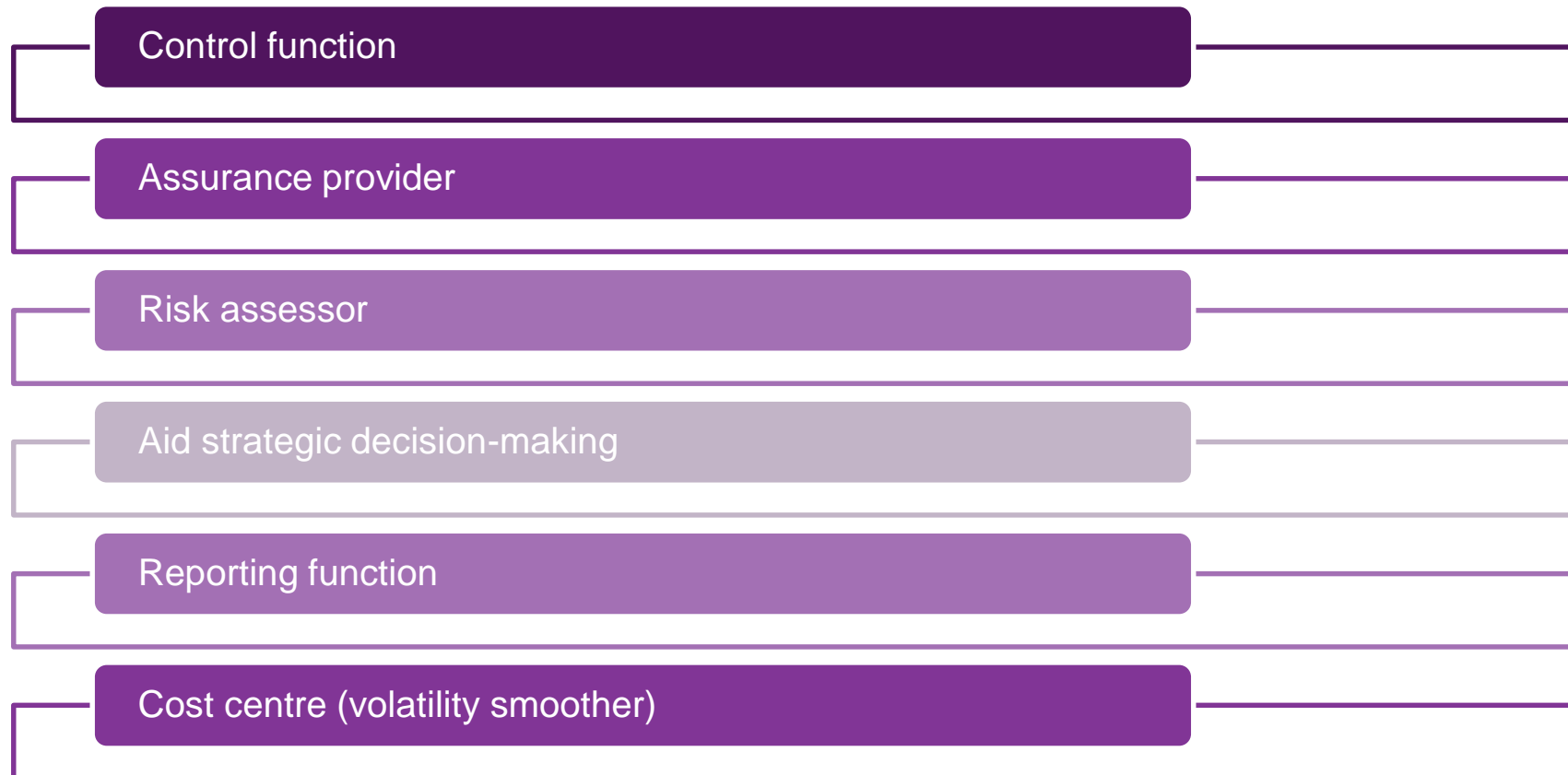
- Assurance that resource allocation to treat identified threats is optimal

## Exercise: What is the role of risk & insurance?





# Risk Function Roles



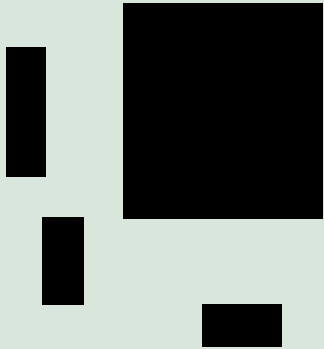
# Responsibilities



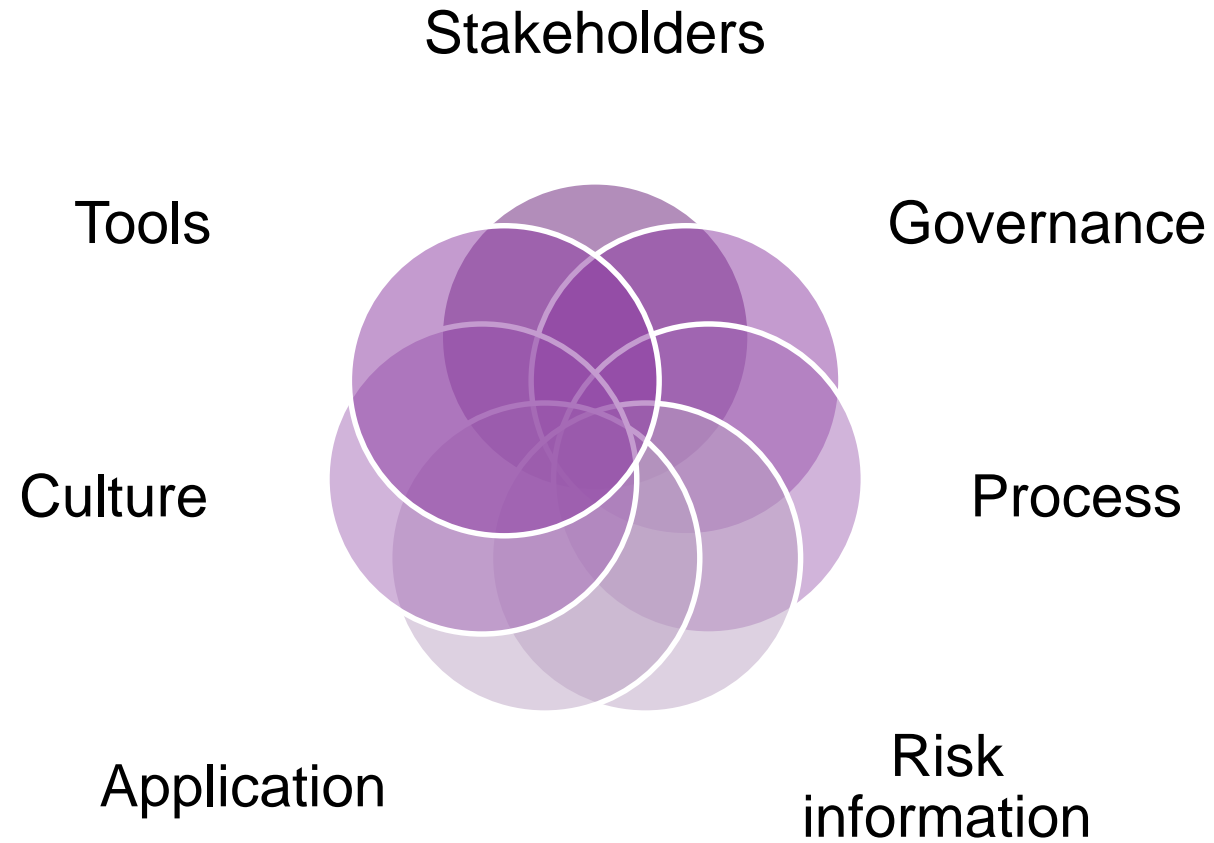
## Risk management objectives

1. Confidence over understanding the key threats to the business accomplishing its strategic objectives.
2. Consensus view on adequacy of resource to mitigate identified risks - and an understanding of how to tackle risk controls if existing mitigation currently deemed insufficient.
3. Agreement on Risk appetite
4. Ability to provide insight on risks in the decision making process
5. Ability to demonstrate to stakeholders (employees; contractors; suppliers; JVs; investors) that manages risk in a proactive and systematic manner in line with internationally recognised standards.
6. Assurance that risk transfer aligned to risk profile and good value for money.

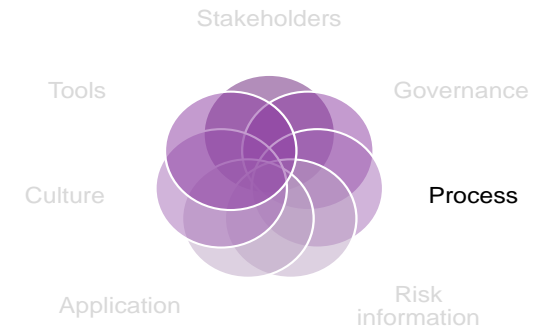
## RM Process



## ERM elements



# Process



- Objectives determined
- Risk appetite
- Common terminology

Monitor and Review

Establish the context

Identify the risks

Analyse the risks

Evaluate the risks

Treat the risks

Communication and consultation

- Effective risk monitoring and reporting

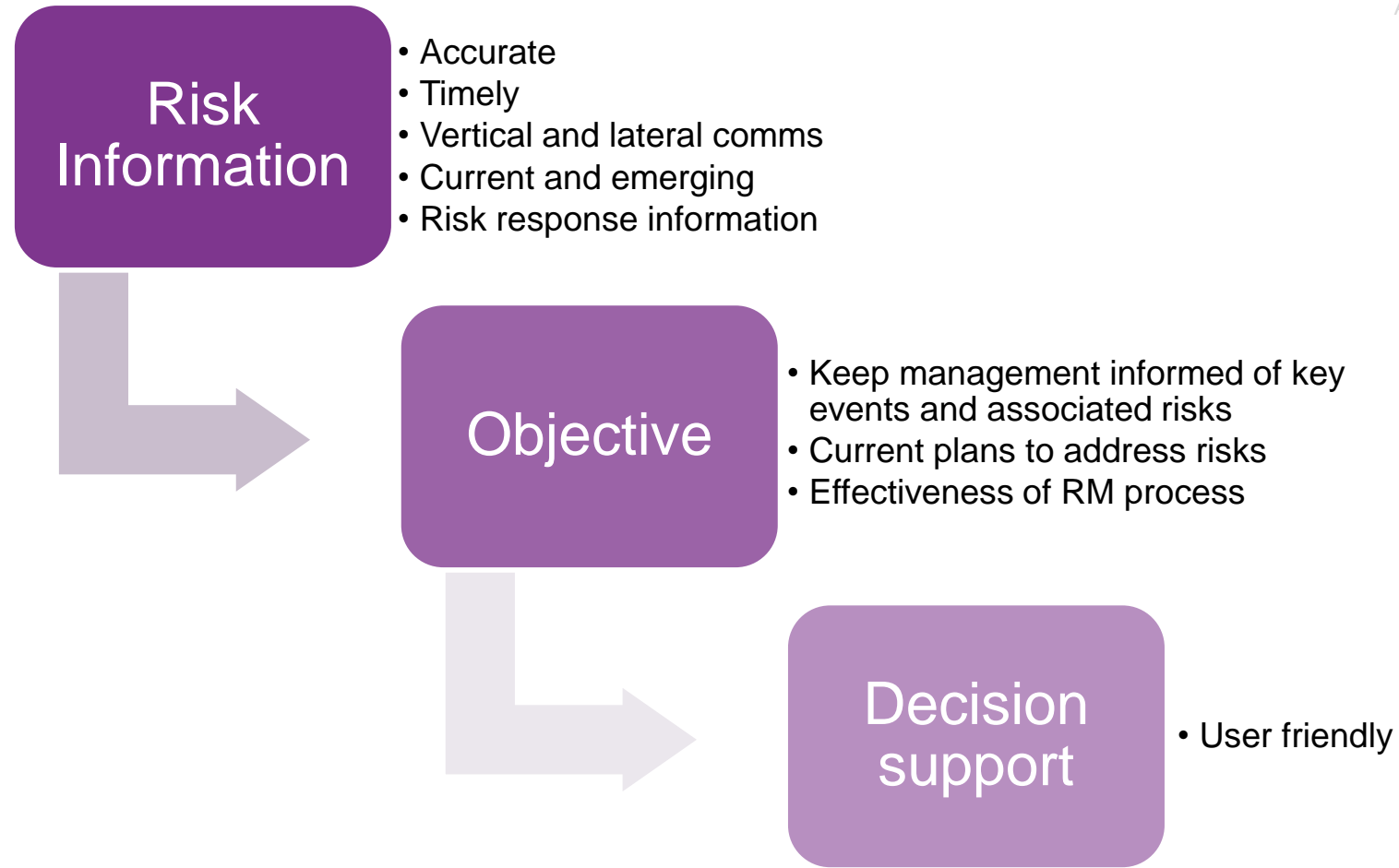
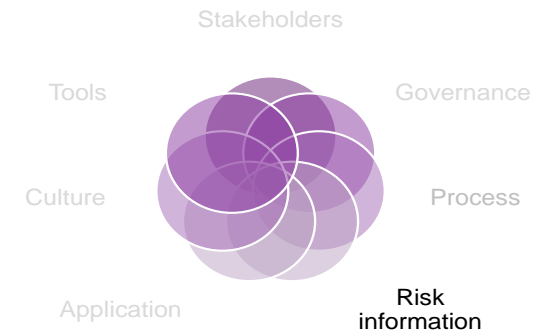
- Effective treatment

- Top down and bottom-up
- Integrated in process

- Consistency in assessment
- Individual and aggregated analysis

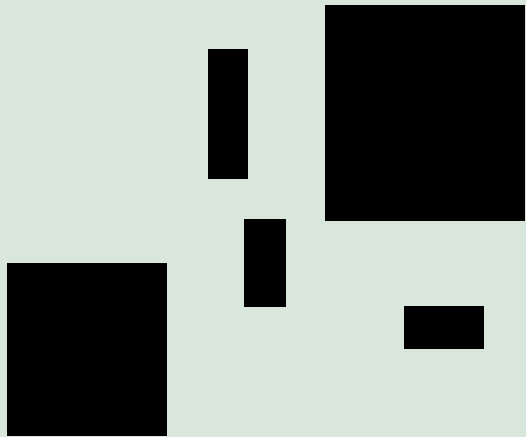
- Risk appetite
- Control effectiveness
- CBA

# Risk information



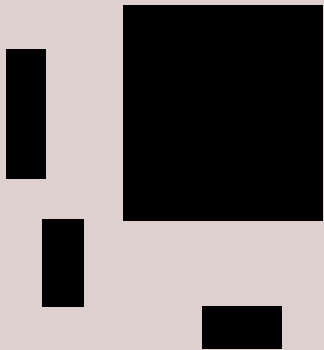


## Role of risk reporting



## Exercise

What are internal and external reporting requirements and objectives?



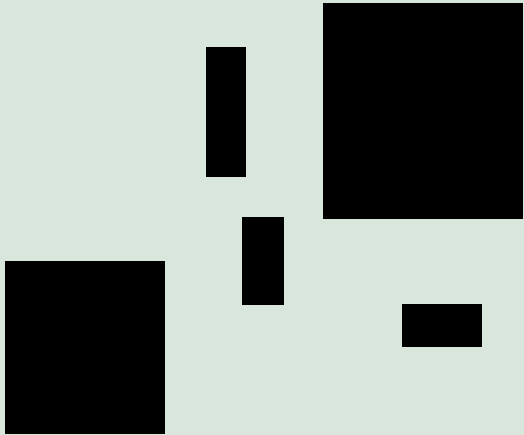
# Reporting characteristics

- Timely
- Accurate
- Contextual
- Relevant
- User friendly

## What to avoid

- Risk Register with 171 risks reported to the Board of Directors – Quarterly
- “What keeps you awake at night” risk assessment
- Check the box exercises – compliance & controls focus
- Risk assessment done...now what? No risk mitigation and monitoring process
- Overtaxing ERM stakeholders
- Focusing on wrong risks
- Inadequately defined risks

## Examples - Qualitative

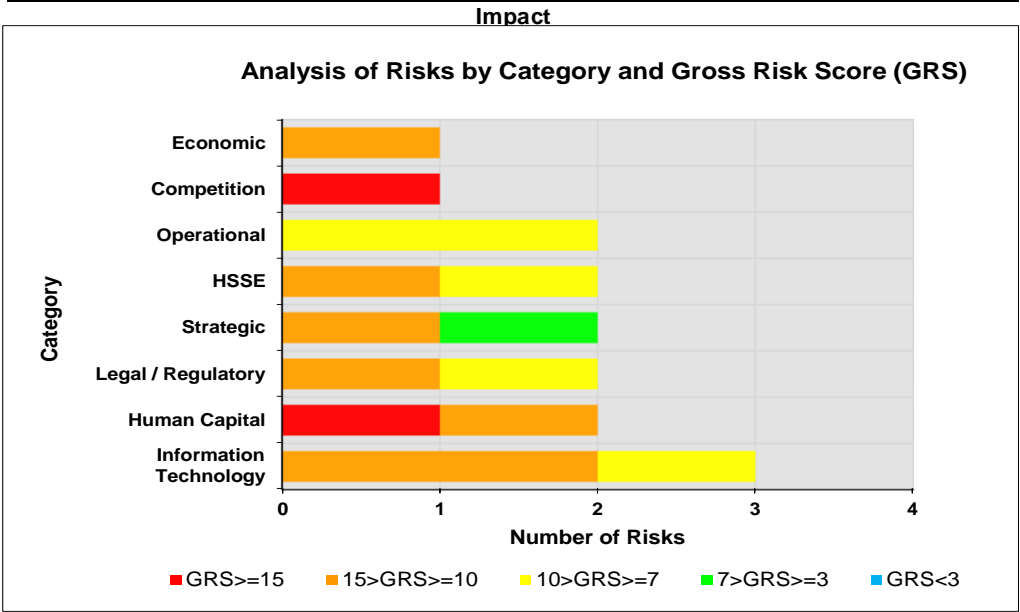


# Presenting Risk Information

## Overview of the risk profile

#	Risk Name	Category	I	L	GRS	Risk Owner
1	Loss or Departure of Key Individuals	Human Capital	4	4	16	Jane Doe
2	Aggressive Competitor Strategic Actions	Competition	4	4	16	Jim Smith
3	Change in Legal or Regulatory Requirements	Legal / Regulatory	4	3	12	John Brown
4	Economic Downturn	Economic	4	3	12	Jim Smith
5	Miscalculated Strategic Decision or Inaction	Strategic	4	3	12	Jim Smith
6	Data Quality, Accessibility & Integration	Information Technology	4	3	12	Sally Long
7	Unable to Attract & Retain Qualified Personnel	Human Capital	3	4	12	Jane Doe
8	System Failure or Network Outage	Information Technology	3	4	12	Sally Long
9	Catastrophic Event (Natural or Man-made)	HSSE	5	2	10	Jack Miller
10	Breach of Confidential or Proprietary Information	Information Technology	3	3	9	Sally Long
11	Supply Chain Risks	Operational	3	3	9	Kim Davis
12	Failure to Comply with Legal or Regulatory Requirements	Legal / Regulatory	4	2	8	John Brown
13	Customer Satisfaction or Failure to Meet Customer Expectations	Operational	4	2	8	Kim Davis
14	Consumer Health, Safety or Quality Event	HSSE	4	2	8	Jack Miller
15	Failure to Effectively Develop or Execute Strategy	Strategic	3	2	6	Jim Smith

5					
4			7,8	1,2	
3			10,11	3,4,5,6	
2			15	12,13,14	9
1					
	1	2	3	4	5



# Presenting Risk Information

## Mapping risk to strategic objectives

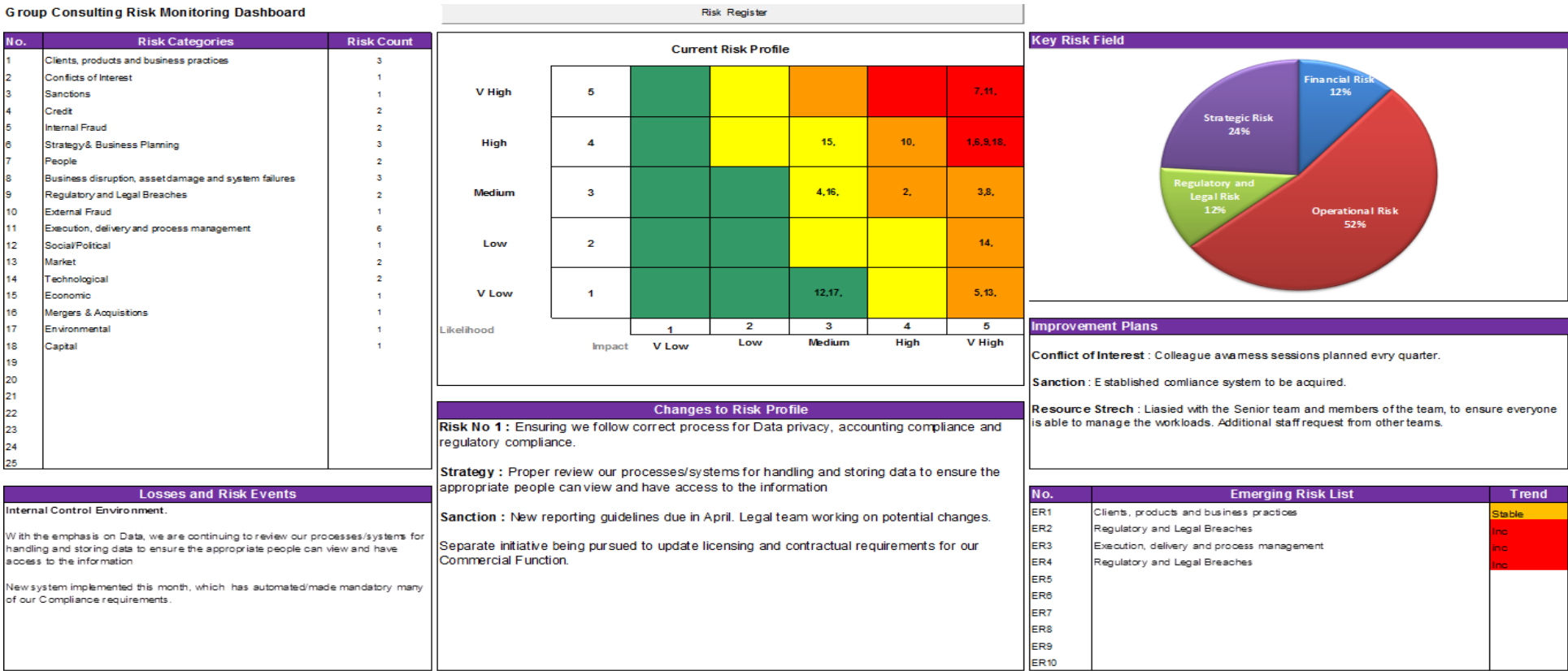
Risk Issues:	Strategic Objective:			
	Focus on Primary Business	Innovation & Product Development	Expand Geographic Footprint	Process Efficiency & Standardization
Inability to Attract & Retain Key Personnel			x	x
IT Infrastructure & Strategy Implementation		x		x
Loss or Unexpected Departure of Key Individual(s)	x			x
Failure of Integration Strategies	x		x	x
IT Outage or Security Interruption		x		x
Emerging Market Environments			x	
Failure to Develop Innovative Products / Services		x		
Capital Restraints		x	x	
Competitor Actions	x	x	x	
Loss of Key Customer(s)	x		x	
Product Safety & Control	x		x	x
Macroeconomic Risks			x	
Failure of Business Plan (Effectiveness or Execution)				x
Misalignment with Shareholder Expectations		x	x	



# Risk Aggregation, Assessment and Communication

## Dashboards

- Allow for filtering of risks and shifting of views between Business Units/Corporate Functions
- Include commentary on emerging risks, controls, mitigating actions and improvement plans

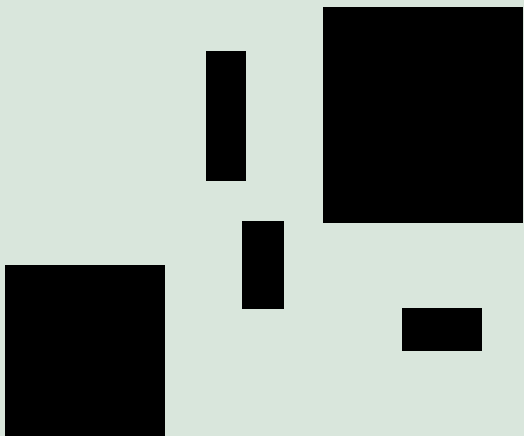


# Presenting Risk Information

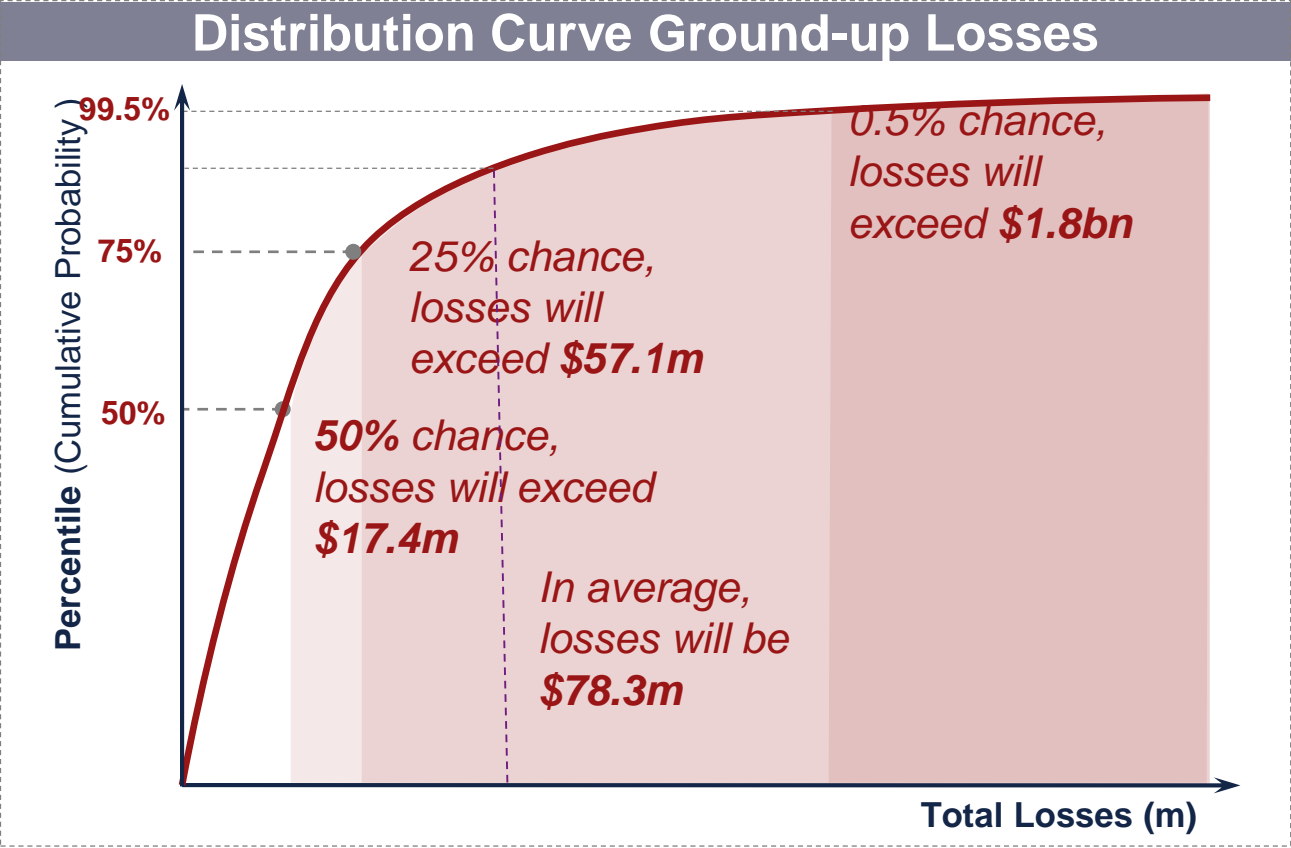
Deep dives on 2-3 top risk issues and the mitigation strategy

Risk 2: Pricing / Consumerism		Risk Scores	Impact	Likelihood	GRS
Underlying Vulnerability:	Cost of care is expensive; Complexity of pricing; Pricing methodology not apparent to consumer; Medical tourism; Cost shifting; State is expensive (labor, etc.); Volume dependent; Staffing ratios and other unfunded regulatory mandates	Before Improvement	5	3	15
		After Improvement	3	2	6
Trigger:	Increased price transparency / consumerism; Major media story (i.e. "The Bitter Pill")				
Consequences:	Loss of commercial business; Reputational damage; Loss of critical services that are not profitable; Layoffs; Employee moral; Increased price regulation				
Current Controls:	Cost reduction program; Pricing Strategy; Modern Pricing advocacy; Internal communication on cost shifting; Educational programs for community, brokers and employers				
#	Risk Name	Category		Responsible	
2	Pricing / Consumerism	Financial		John Smith	
Action		Measure of Success		Allocated to	Delivery
Analysis of modernized pricing to develop organizational strategy		Formal Report / Analysis and recommendation		A. Smith	31-Dec-17
Develop bundle pricing and services programming to compete more effectively (e.g. major joint)		One bundled payment contract with a payor		J. Doe	31-Dec-17
Develop plan to educate population on healthcare pricing		Plan developed & in place - quarterly communications		S. Jones	31-Mar-18

## Examples - Quantitative



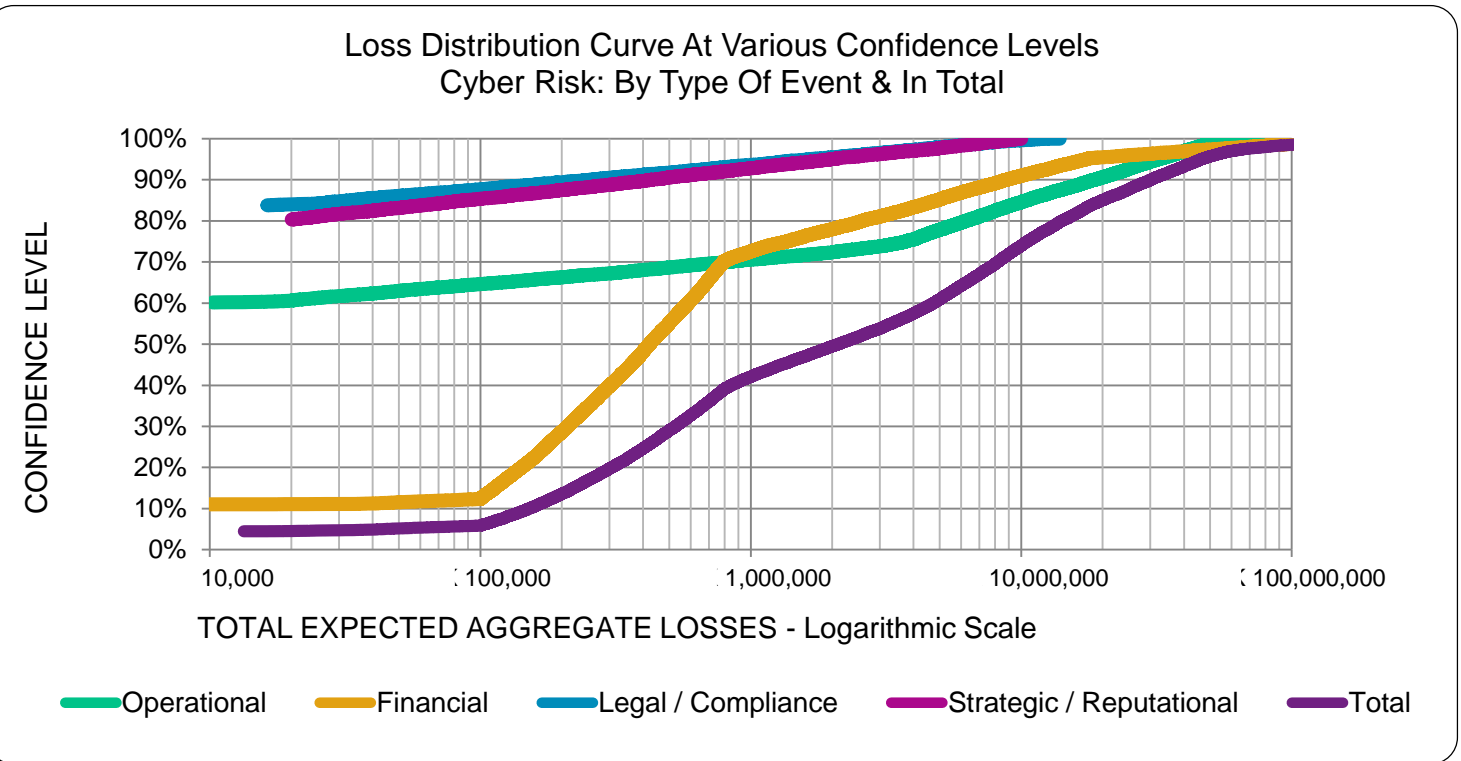
# Communicating insurance



Distribution Table Ground-up Losses			
Return Period (Years)	Percentile	Gross Losses	
		Total Loss (\$m)	Total Number
1 in 2	50.0%	17.4	2
1 in 4	75.0%	57.1	3
1 in 10	90.0%	153.6	4
1 in 20	95.0%	281.1	5
1 in 100	99.0%	1,189.9	6
1 in 200	99.5%	1,756.1	7
1 in 1000	99.9%	3,911.8	8
Average		78.3	2.15

## Quantifying non-insurable risk

Loss distribution curves at various confidence intervals for each defined scenario and a gross results table for all scenarios at varying confidence intervals



Amounts in USD		Gross Results - All Scenarios				
Return Period (Years)	Percentile	Total Gross Cost	Operational	Financial	Legal / Compliance	Strategic / Reputational
1 in 2	50.0%	17.76	-	0.59	-	-
1 in 4	75.0%	102.76	36.02	10.45	-	-
<b>1 in 10</b>	<b>90.0%</b>	<b>292.50</b>	<b>174.29</b>	<b>87.00</b>	<b>2.01</b>	<b>4.36</b>
1 in 20	95.0%	466.42	310.90	175.15	13.42	22.18
1 in 100	99.0%	1,184.30	502.06	1,118.32	73.15	73.98
<b>1 in 200</b>	<b>99.5%</b>	<b>1,597.44</b>	<b>549.53</b>	<b>1,512.66</b>	<b>92.03</b>	<b>85.46</b>
1 in 500	99.8%	1,891.75	631.74	1,857.80	111.83	93.19
1 in 1000	99.9%	1,995.67	738.89	1,946.80	117.50	96.16
	<b>Mean</b>	<b>102.22</b>	<b>47.76</b>	<b>48.48</b>	<b>2.72</b>	<b>3.26</b>
	<b>Std Dev</b>	<b>220.32</b>	<b>109.27</b>	<b>191.48</b>	<b>12.23</b>	<b>12.40</b>

- Combined average loss forecast is **USD102.22m**, driven by:
  - Operational risk is the largest total cost
  - Financial costs are the most frequent scenario type
- In a catastrophic year (1 in 200 year likelihood) the client could experience Cyber losses of **USD1,597.44m** or higher

# Risk Maturity Assessment

WillisTowersWatson 

Current Status

Priority Sort

Timeframe Sort

Resource

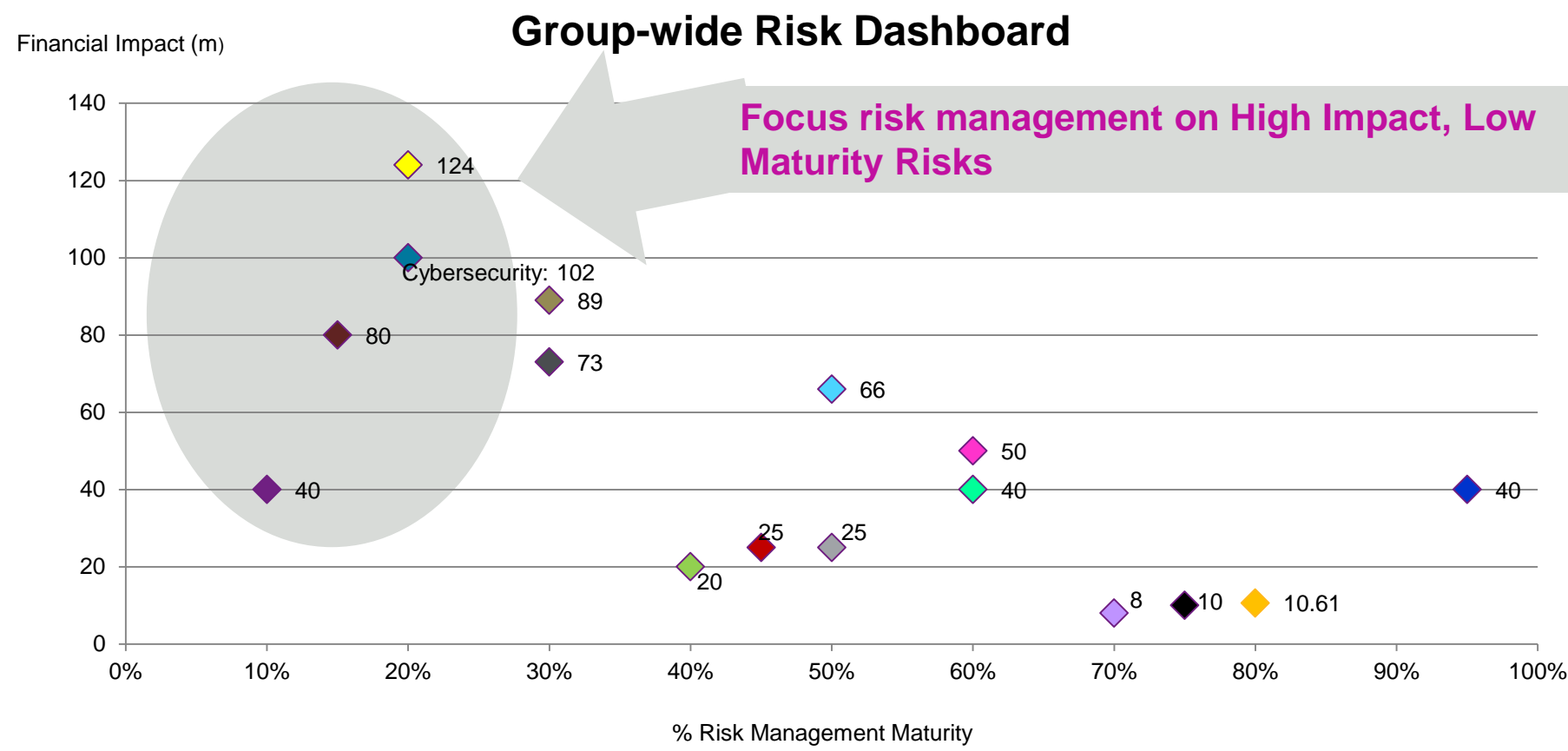
## Enterprise Risk Management Maturity Assessment process

Reset Order

Framework Element	Current Status					Improvement Planning		
	1. Informal	2. Basic	3. Formalized	4. Advanced	5. Leading	Priority	Timeframe (Months)	Resources
1 Stakeholder Definition						Medium	1 year +	Low
2 Culture, Commitment & Mandate						N/A	N/A	N/A
3 Group Risk Appetite Definition						Low	6 to 12 months	Low
4 Clarity of Group Objectives and Strategy						Low	1 year +	High
5 BU Risk Tolerance Specification						High	0 to 6 months	Medium
6 Governance						Low	1 year +	Low
7 Risk Policy						Low	1 year +	Low
8 Risk Identification						Medium	6 to 12 months	Medium
9 Risk Articulation						Low	1 year +	Low
10 Risk Quantification						N/A	N/A	N/A
11 Risk Improvement						Medium	1 year +	Low
12 Monitoring						TBC	TBC	TBC
13 Communication						TBC	TBC	TBC

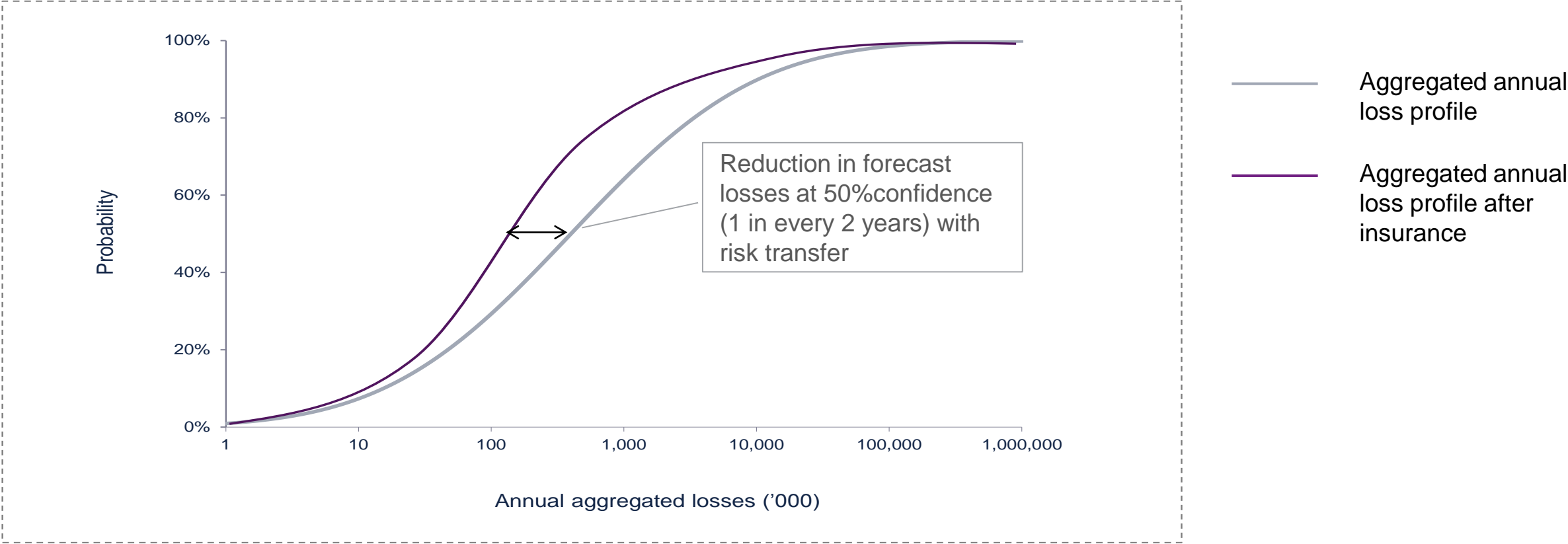
# Strategic Group-wide Risk Dashboard

The dashboard maps the forecast financial impact of each risk to risk management maturity (median, mean and worst-case maps can be produced)



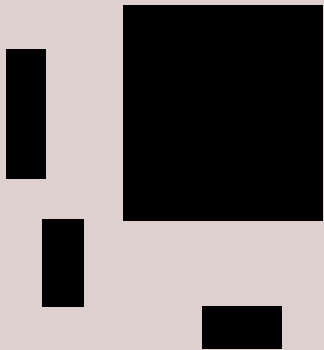


# Modelling to establish value of risk transfer



## Exercise

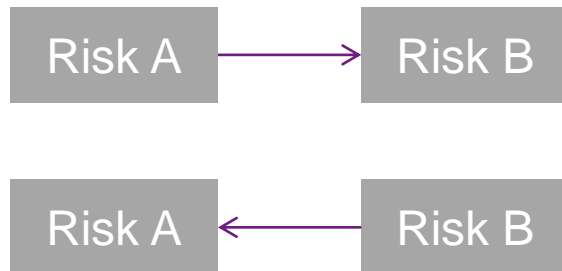
What are the pros and cons of qualitative and quantitative reporting?



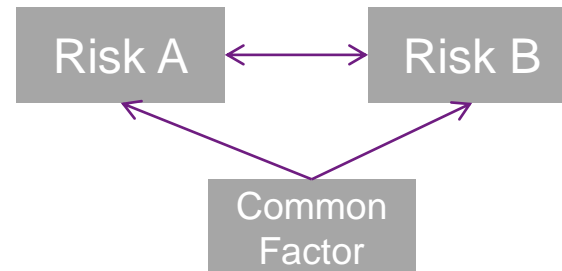
## Don't forget....Correlation & Diversification!

Risks may be linked both directly and /or indirectly...

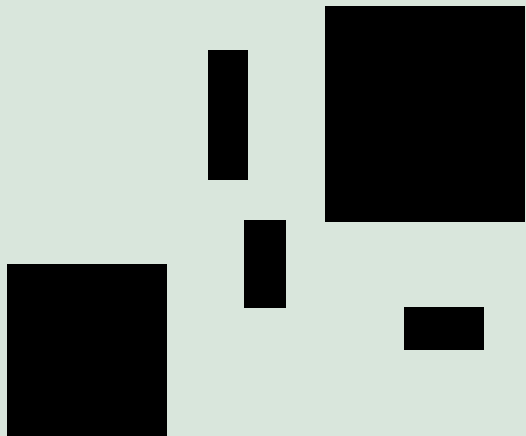
Does risk A impact risk B or vice versa?



Are there events that could affect risk A and risk B?

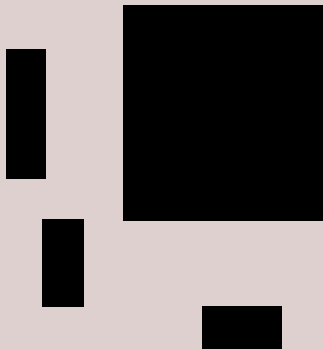


## Risk appetite



## Exercise

What does a good risk appetite statement / determination look like?



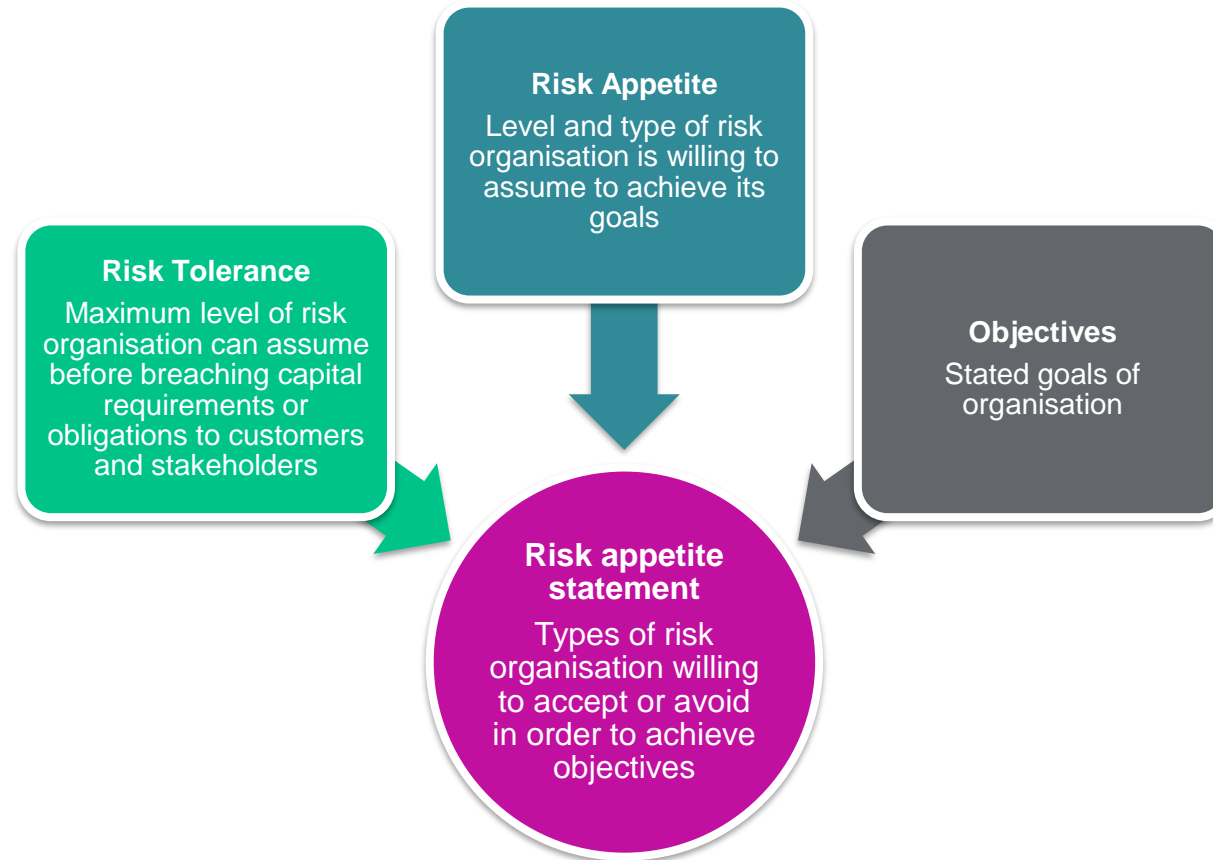
## Risk appetite – the good and the bad



Consensus on materiality  
Decision support  
Brand positioning

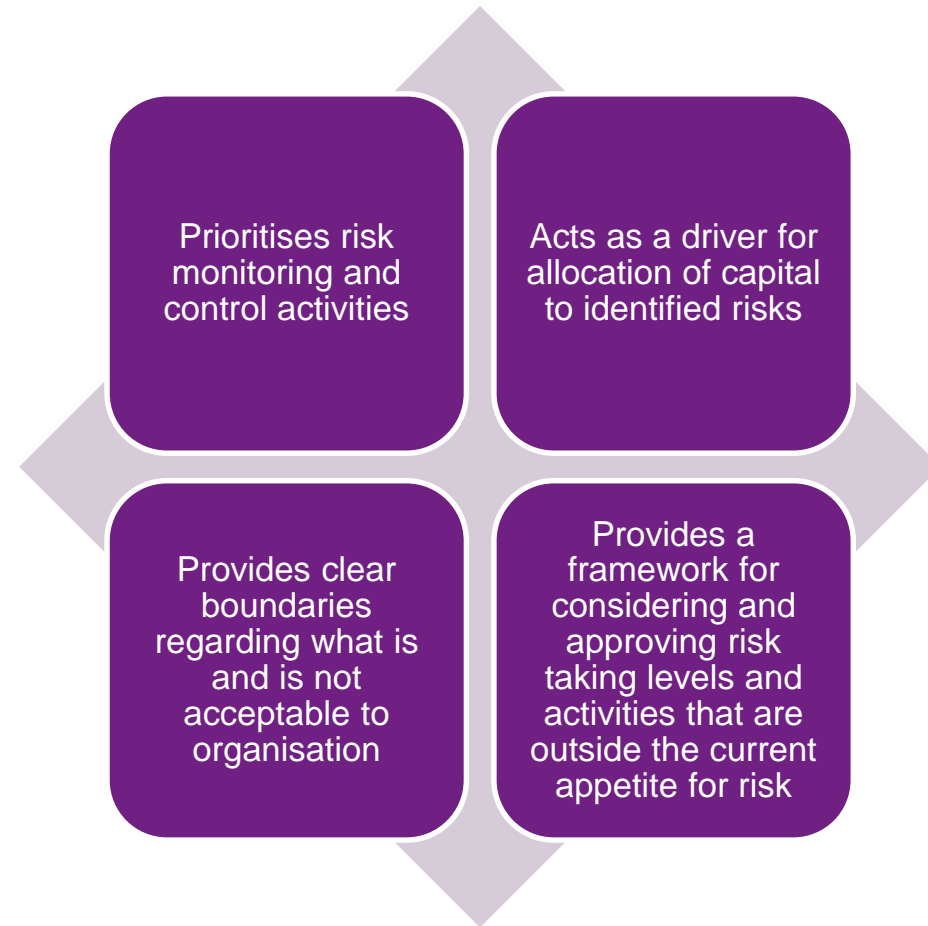
Complicated  
Inconsequential  
Uninformative

# Risk appetite – the fundamentals





## Risk appetite – drivers



## Example risk appetite statements

Risk	Qualitative Statements	Quantitative Statements
Investment Risk	<ul style="list-style-type: none"> <li>Cash will only be placed with an investment grade bank</li> <li>Cash can only be placed with counterparties who have been assessed and formally approved</li> <li>No hedging of FX exposures</li> <li>Hold working capital in cash or cash equivalents</li> <li>Maintain sufficient liquid resources</li> <li>No breaches of investment restrictions as outlined in the mandate</li> </ul>	<ul style="list-style-type: none"> <li>X% drop in projected IRR prompts discussion at Board level</li> <li>Max \$x can be placed with one counterparty</li> <li>Minimum \$x of cash must be maintained</li> </ul>
Operational Risk	<ul style="list-style-type: none"> <li>Effective controls must be maintained</li> <li>No failures of services by critical outsourcers and/or third parties</li> </ul>	<ul style="list-style-type: none"> <li>Maximum of x significant Operational Risk losses or max x major Operational Risk losses per 12 month period</li> </ul>
Technology and Cyber Risk	<ul style="list-style-type: none"> <li>No material compromise of the security of information that is critical to operations</li> </ul>	
Valuation and Methodology Risk	<ul style="list-style-type: none"> <li>No material deviations from the valuation methodology</li> <li>No adverse audit opinions in relation to the valuation of assets</li> </ul>	
Reputational and Strategic Risk	<ul style="list-style-type: none"> <li>No material negative headlines or negative media coverage</li> </ul>	
Regulatory and Compliance Risk	<ul style="list-style-type: none"> <li>No material failure to comply with applicable laws, regulations or codes across all regions / jurisdictions</li> <li>No negative externally qualified audit opinion</li> </ul>	<ul style="list-style-type: none"> <li>Maintain a margin of capital in of x% in excess of the minimum regulatory amount</li> </ul>

# Ten Risk Appetite Requirements (Source: UK Actuaries)

## 1. Vertical coherence

- Risk appetite statements should be coherent up and down the organisation structure
- If there is a risk target for a department it should be consistent with the risk appetite of the company

## 2. Horizontal coherence

- Risk appetite statements should be coherent across sister companies and departments
- It does not mean they should have the same risk targets, more risk may be acceptable for mature or key businesses, but risk targets should be similarly expressed and measured

## 3. Stakeholder coherence

- Reconcile different objectives/appetites of different stakeholders
- Are management and shareholder interests aligned? How may that change?

## 4. Analytical Balance

- Balance of quantitative and qualitative
- Ideally risk targets are measurable but some qualitative statements, eg maintain A+ S&P rating, are part of every risk appetite statement

## 5. Decision Support

- Risk appetite should support risk-related decision making
- Requires integration into internal capital / dynamic financial analysis models

# Ten Risk Appetite Requirements (cont)

## 6. Governance

- “The risk appetite statement should offer complete and appropriate support for the processes and responsibilities surrounding the monitoring and review of an organisation’s risk appetite”
- Means the risk appetite statement must be fit for purpose

## 7. Awareness

- People using the statements need to be aware of the guidance and understand them
- It is not a secret, risk targets must be known within the organisation by people who need to know them

## 8. Usability

- The risk appetite statement should be usable
- It should be expressed in terms that make intuitive sense and should be measurable

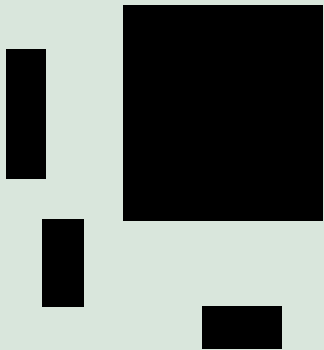
## 9. Influence

- The risk appetite statement should influence key decision makers in the organisation
- This must not be viewed as a compliance exercise but visibly drive decision making (otherwise it will not be judged compliant)

## 10. Credibility

- The risk appetite statement should be credible compared to actual and expected performance

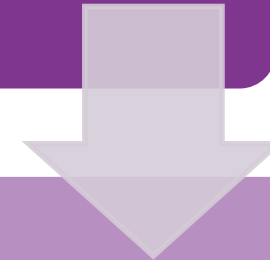
## Conclusion



# ERM current trends

## Current drivers

- Convergence of governance and compliance (eg conduct risk)
- Focus on ethical standards – transparency and accountability
- Demonstrating long term viability
- Ensuring risk information supports decision-making



## Current trends

- Scenario assessment – top down view of risk that takes into account risk correlation and risk aggregation
- Understanding tail risk
- Using risk data (quantitative and qualitative) to support decision-making
- Integrating risk process within operational, financial and planning
- Ensuring ERM is pragmatic and commercial

